

Appln No. 09/835,711
Amdt. Dated April 6, 2004
Reply to Office action of October 8, 2003

2

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-154 (Cancelled).

155. (Currently Amended) An inkjet printhead assembly, including:

a longitudinally extending inkjet printhead, including a plurality of longitudinally spaced apart power supply points and a plurality of longitudinally spaced apart ground supply points;

at least one longitudinally extending power busbar;

at least one longitudinally extending ground busbar; and

interconnect means configured to connect a plurality of said power supply points to said at least one power busbar and a plurality of said ground supply points to said at least one ground busbar
wherein said interconnect means is configured such that it need only be connected to said printhead along one edge thereof.

156. (Previously Presented) An inkjet printhead assembly according to claim 155, wherein said busbars extend parallel to said inkjet printhead and said interconnect means extend generally transversely between the busbars and the respective power and ground supply points.

157. (Previously Presented) An inkjet printhead assembly according to claim 155, wherein said interconnection means includes at least one tape automated bonded (TAB) film.

158. (Previously Presented) An inkjet printhead assembly according to claim 157, wherein said TAB film electrically connects with said busbars by means of correspondingly sized noble metal deposited strips formed on said TAB film.

159. (Previously Presented) An inkjet printhead assembly according to claim 157, wherein the at least one TAB film is double-sided and includes:

Appln No. 09/835,711
Amdt. Dated April 6, 2004
Reply to Office action of October 8, 2003

3

power and ground interconnect means on a first side of the TAB film, the power and ground interconnect mean connecting said busbars and their corresponding power and ground supply points; and

control line interconnect means the other side of the TAB film, the control line interconnect means being configured to provide the inkjet printhead with control data from a print controller.

160. (Previously Presented) An inkjet printhead assembly according to claim 155, wherein said interconnect means also includes a plurality of control lines configured to provide the inkjet printhead with control data from a print controller.

161. (Previously Presented) An inkjet printhead assembly according to claim 155, wherein said interconnect means is in the form of one or more printed circuit boards connected directly to said busbars, with wire bonds connecting the printed circuit boards to said printhead.

162. (Cancelled).

163. (Previously Presented) An inkjet printhead assembly according to claim 160, wherein the inkjet printhead is in the form of a plurality of printhead chips manufactured by a MEMS processing technique.

164. (Previously Presented) An inkjet printhead assembly according to claim 155, wherein said inkjet printhead has a plurality of nozzle arrangements, each of which includes a thermal bend actuator device for ejection of ink from a corresponding nozzle.

165. (Previously Presented) An inkjet printhead assembly according to claim 160, including an associated ink supply unit for delivering ink to ink supply passages formed in said printhead.

166. (Previously Presented) An inkjet printhead assembly according to claim 165, said ink supply unit including: a slot for insertion of said printhead; and a series of elongated chambers for the storage of separate color inks, said chambers being interconnected with said slot for the supply of ink to said printhead, wherein said busbars are disposed along said ink supply unit and the interconnect means take the form of a tape automated bonding (TAB) strip similarly disposed along an outside of said ink

Appn No. 09/835,711
Andt. Dated April 6, 2004
Reply to Office action of October 8, 2003

4

supply unit, the TAB strip including a series of control lines along one surface thereof for mating with a corresponding external series of control lines for receiving control signals from a print controller, said TAB strip further having a repeating series of interconnects to said inkjet printhead, said interconnects interconnecting said control lines and said busbars to said printhead.

167. (Previously Presented) An inkjet printhead assembly according to claim 155, wherein each of said busbars comprises a mechanically stiff conductive rail.

168. (Previously Presented) An inkjet printhead assembly according to claim 155, wherein said interconnect means includes a flexible portion that connects with said inkjet printhead.

169. (Previously Presented) An inkjet printhead assembly according to claim 166, wherein said ink supply unit includes a series of positioning protuberances for accurately locating the power supply busbars and/or interconnect means therewith.

170. (Previously Presented) An inkjet printhead assembly according to claim 155, comprising at least two of the power supply points, wherein the inkjet printhead comprises at least two printhead chips, the inkjet printhead assembly being configured such that each of the at least two power supply points is supplied with power from a different one of the power supply points.